



COMPANY:	Trinity Metals obo Musha Mines	DATE:	24 April 2025
ATTENTION:	Ronald Toledo	QUOTE NO:	QN25000347
E-MAIL:	ronald.toledo@trinity-metals.com >	CC:	Mphob@multotec.com
CLIENT ENQ NO:	Desliming and Stacker Cyclones		

Dear Ronald,

We thank you for your enquiry e-mailed to us and take pleasure in submitting our budget quotation for your consideration. This proposal is for Tin Desliming cyclone and Stacker cyclone applications.

Desliming Cyclone

A standalone cyclone with a diameter of 100mm was sized and selected based on the following given process feed conditions:

- Solids SG: 2.75 t/m³
- Cyclone Feed Solids rate: 3.95 tph
- Cyclone Feed Slurry: 10.81m³/h
- Cyclone Feed Solids Concentration: 29.65% w/w
- Feed PSD

The cyclone is expected to operate at 90kPa achieving an estimated D50c cut point of 19µm. A mass split of 99.89% is achieved to the cyclone underflow based on the given feed PSD.

Stacker Cyclone

A standalone cyclone with a diameter of 100mm was sized and selected based on the following given process feed conditions:

- Solids SG: 2.97 t/m³
- Cyclone Feed Solids rate: 3.95 tph
- Cyclone Feed Slurry: 19.34m³/h
- Cyclone Feed Solids Concentration: 17.99% w/w
- Feed PSD

The cyclone is expected to achieve an estimated D50c cut point of 14µm. A mass split of 99.87% is achieved to the cyclone underflow at 81.67% Solids(w/w) based on the given feed PSD.

Description	Qty.	Unit Price ZAR	Total Price ZAR
V100-15-0/A-C/20 (50-HS) c/w 180° HDPE OE	1	R 12,672	R 12,672
Commissioning Spigots – one size smaller (50-HS/18-PE)	1	R 420	R 420
Commissioning Spigots – one size larger (50-HS/22-PE)	1	R 391	R 391
VV100-8-1/A-B/20 (7-HS) c/w Stacker 90° OE	1	R 27,713	R 27,713
Commissioning Spigots – One Size smaller (7-HS/18-PE)	1	R 231	R 231
Commissioning Spigots – One size larger (7-HS/23-PE)	1	R 264	R 264
Transport	LOT	R 19,250	R 19,250
Grand Total (CIP, Kigali Airport, Rwanda, Packed & Excl VAT)			R 60,941



The GA drawings included are for reference only and should not be used for design detail purposes. The production lead time is 8 working weeks, and an additional 1 working week will be required for the submission of GA drawings and QCP's to the client for approval, this is calculated from receipt of official order and finalization of all commercial and technical details. The total lead time will be 9 working weeks plus additional time taken for the customer to approve the drawings and QCP's, this is subject to the Company's Drawing Office and factory workload.

Other Multotec equipment that can be supplied into the tin processing flowsheets and other commodities include:

- Spirals
- Pipe Launderers
- Samplers
- Screen panels and media
- Spray nozzles
- Wear solutions
- Mill and Scrubber liners
- Conveyor belt accessories
- Sensor Technology
- DMS cyclones and densifiers
- Pumps
- Flotation rotors and stators
- Hi-frequency screens
- Centrifuges -chemical industry

PLEASE NOTE:

- Please note the quote is only valid for 30 days.
- Multotec terms and Conditions apply for this proposal. Please request a copy of the T & C's should you require them.

We trust that the above meets with your approval and should you require any additional information, please do not hesitate to contact us.

Kind Regards

MULTOTEC PROCESS EQUIPMENT (PTY) LTD

Louzinda Pretorius

Louzinda Pretorius

Sales Administrator

Tel No: +27 (11) 923 6018

E-Mail: LouzindaP@multotec.com



Mboneni Ntsieni

Senior Process Engineer

Tel No: +27 (11) 928 6000

E-Mail: Mbonenin@multotec.com



Stacker Cyclone

Multotec Process Equipment (Pty) Ltd

Client: Trinity Metals
 Application: Stacker Cyclone
 Feed Condition: **NOMINAL**
 Equipment Number: TBA
 Cyclone Type: VV100-8-1/A-B/20 c/w Stacker 90 OE
 Distributor Type: Stand alone
 Spigot Series : 7-HS Standard
 Installation: Stacker
 Cyclones, on line: 1
 Cyclones, standby: 0
 Distributor Outlets, blanked off: n/a
 Estimated D50C Cut Size: 14 micron
 Viscosity: 1 centipoise
 Operating Pressure: 125 kPa With Overflow Vacuum Break set at -20kPa
 Solids SG: 2,97 α Water : 4,92%



MASS BALANCE:	Feed	Underflow	Overflow
Solids SG:	2,97	2,97	2,97
Solids t/hr:	3,95	3,95	0,00
Solids m3/hr:	1,33	1,33	0,00
Percent Split	100,00%	99,90%	0,10%
Liquid SG:	1,00	1,00	1,00
Liquid t/hr:	18,01	0,89	17,12
Liquid m3/hr:	18,01	0,89	17,12
Percent Split	100,00%	4,92%	95,08%
Pulp RD:	1,14	2,18	1,00
Pulp t/hr:	21,96	4,83	17,13
Pulp m3/hr:	19,34	2,21	17,13
Percent Split	100,00%	11,45%	88,55%
% Solids w/w:	17,99	81,67	0,02
% Solids v/v:	6,88	60,00	0,01

V27.5 TEST Beta

Prepared by Mpho: 16 April 2025

Stacker Cyclone
 Particle Size Distribution:

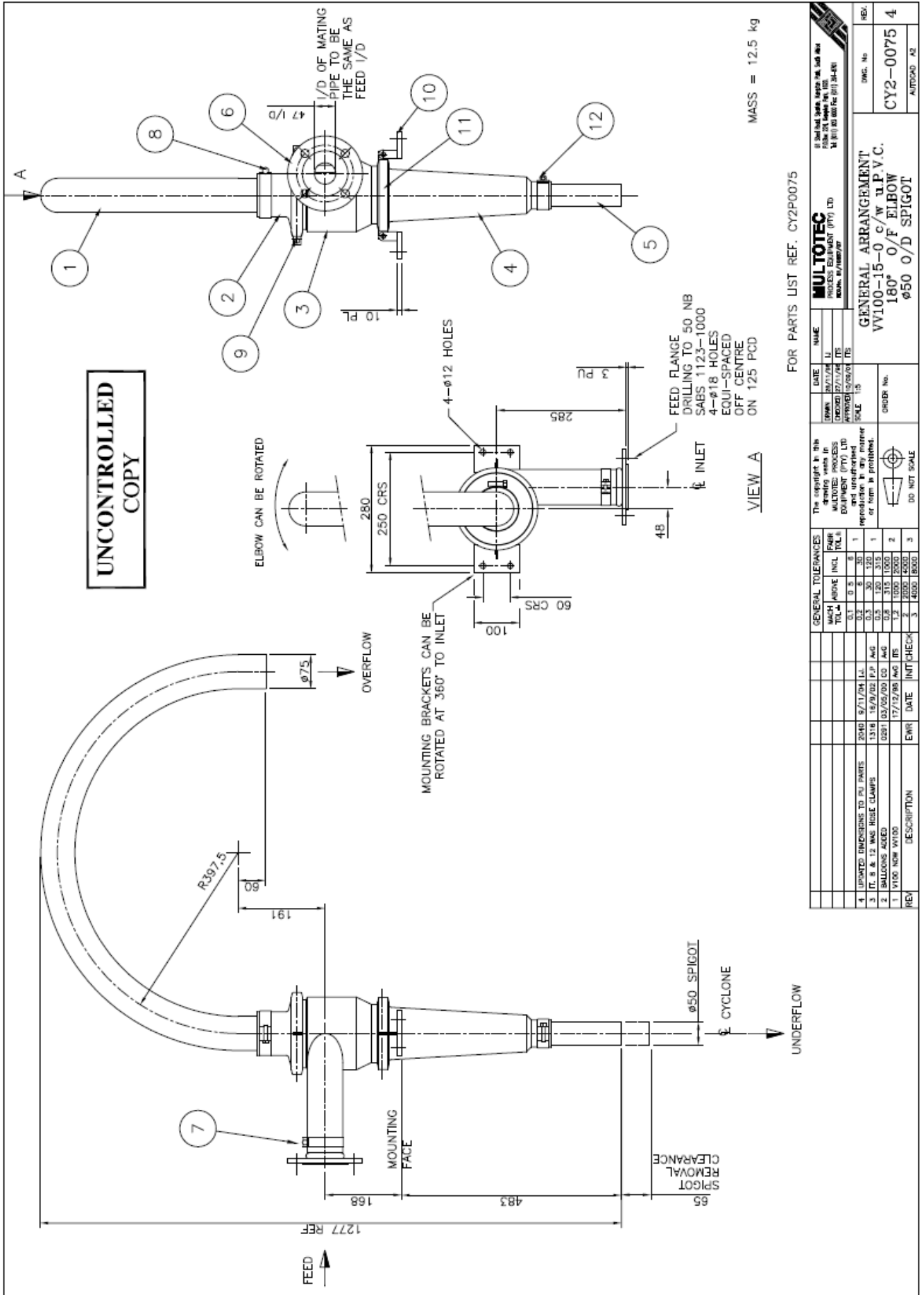
Size Microns	Cumulative % Passing			Uncorrected Tromp Curve
	Feed	Underflow	Overflow	
2000	100,0	100,0	100,0	100,0%
2000	100,0	100,0	100,0	100,0%
2000	100,0	100,0	100,0	100,0%
2000	100,0	100,0	100,0	100,0%
2000	100,0	100,0	100,0	100,0%
1000	100,0	100,0	100,0	100,0%
500	71,2	71,2	100,0	100,0%
300	47,0	46,9	100,0	100,0%
250	32,8	32,7	100,0	100,0%
125	23,3	23,2	100,0	100,0%
100	16,7	16,6	100,0	100,0%
75	10,0	9,9	100,0	100,0%
53	0,4	0,3	100,0	100,0%
38	0,2	0,1	100,0	100,0%
10	0,1	0,0	90,8	90,7%

Overflow P100: 37 micron

V27.5 TEST Beta

Prepared by Mpho: 16 April 2025





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MASS = 12.5 kg

VIEW A

FOR PARTS LIST REF. CY2P0075

GENERAL TOLERANCES		DATE		NAME	
MACH	FINISH	DATE	NAME	DATE	NAME
±0.1	RA 0.8				
±0.3	RA 1.6				
±0.5	RA 3.2				
±1.0	RA 6.3				
±1.5	RA 12.5				
±2.0	RA 25.0				
±3.0	RA 50.0				
±5.0	RA 100.0				
±10.0	RA 200.0				
±20.0	RA 400.0				
±40.0	RA 800.0				

REV	DESCRIPTION	DATE	INT/CHECK	BY
1	PI100 NOW W1100	17/12/98	AWG/RS	
2	BALLOONS ADDED	03/02/00	ED/AG	
3	IT, 8 & 12 WAG INSE CLAMPS	15/9/02	PJP/AG	
4	UPDATED DIMENSIONS TO P&I PARTS	8/11/04	JL/AG	

MULTITEC		DATE		NAME	
DATE	NAME	DATE	NAME	DATE	NAME

GENERAL ARRANGEMENT		DWG. No	
WV100-15-0 c/w u.P.V.C.	180° O/F ELBOW	CY2-0075 4	
		AUTOCAD A2	



ESTIMATED MASS = 33.5kg
FOR PARTS LIST SEE: CY3P4245

61 3rd St, Sanyo, Veolia Env. Syst. Africa
P.O. Box 274, Sanyo, Fick, 1622.
Tel: (011) 823 800 Fax: (011) 894-801

MULTOTEC
PROCESS EQUIPMENT (PTY) LTD
REG. No. 81/10882/07

DATE	NAME
26/02/2012	FVT
26/02/2012	CB
26/02/2012	ITS

GENERAL ARRANGEMENT
VV100-8-1 (STACKER CYCLONE)
90°-FLANGED O/F ELBOW
50-FV & PGA

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SCALE 1:1.3

ORDER No.

DO NOT SCALE

REV	DESCRIPTION	DATE	INIT	CHECK
1	Changed VABA to new standard	26/01/17	DK	AWG

REV	DESCRIPTION	DATE	INIT	CHECK
1	Changed VABA to new standard	26/01/17	DK	AWG

REV	DESCRIPTION	DATE	INIT	CHECK
1	Changed VABA to new standard	26/01/17	DK	AWG

DWG. No
CY3-4245
AUTOCAD A3